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ABSTRACT

This paper addresses the question of whether instruction is a product or a practice and the relationship of these two concepts to instructional design. The points of view presented are based on the framework articulated by Habermas for dealing with different types of relationships between theory and practice and Grundy's application of these ideas to curriculum as guides for dealing with instructional design, instruction, and learning. Grundy describes Habermas' three types of human interests as: (1) the technical human interest, which entails empirical/analytical ways of knowing and represents the world in terms of objects, processes, and laws which describe the transformation of objects and processes; (2) the practical human interest, which entails historical and hermeneutic ways of knowing that represent the physical, social, and cultural worlds as "texts" which have to be interpreted in order for meaning to emerge; and (3) the emancipatory human interest, which entails a critical way of knowing where critical theorems are gleaned through collective reflection on social and cultural practices and then used to restructure future actions. Detailed descriptions of these three interests are followed by discussions of the first two in the contexts of instruction as a product of instructional design, and instructional design and instruction as practice. It is concluded that the theory of practical human interests is a more adequate account of the work done by instructional designers, teachers, and learners than the theory of human interests, and suggestions are offered for ways for instructional designers to reorient their efforts to conform to this theory. (31 references) (BBM)

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Instructional Design and Human Practice: What can we Learn from Habermas' Theory of Technical and Practical Human Interests?

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INTRODUCTION

This paper is going to answer a question that was first asked more generally about curriculum by Shirley Grundy: Is instruction a product or a practice (Grundy, 1987)? The answer to this question will have profound implications for instructional designers because if the outcome of instructional design is a product (e.g., an instructional system or a courseware program) then the work of instructional design is done before instruction begins. If, on the other hand, instruction is a form of practice, then the work of instructional design is integral to the practice of instruction.

To help answer our question about product or practice, I will base many of my arguments on those made by Grundy about curriculum. I will also build on the ideas of Koetting, Nunan, Bullough, and Nichols (Koetting, 1979; Nunan, 1983; Bullough et al., 1984; Nichols, 1989). Of course, ultimately, these ideas trace back to Habermas' Theory of Human Interests (Habermas, 1972, 1984, 1987). Habermas' framework will be explained throughout the paper. However, for now, it is important to clarify the assumptions that Habermas makes about the relationship between theory and practice.

The first assumption is something that every practicing teacher knows: Instructional theories do <u>not</u> determine their instructional practice in any significant way. Some researchers like Heinich (1988) lament that fact. Others like myself find this fact to be a fundamental truth about the human condition (Streibel, 1986, 1988). Namely, <u>all</u> human practice (whether it be the work of instructional designers, or teachers, or human learners) is situated in an ongoing context

that requires continual judgment (Streibel, 1989). Hence, instructional theories are usually treated as resources rather than plans by practitioners and are evaluated for authenticity rather than productive value by practitioners. Grundy summarizes this position very well when she states that "theoretical explanations (e.g., theories of instruction) ... [have to be] grounded in the reality of teachers' experiences." (Grundy, 1987, p. 3). The same is true for the relationship of theories of instructional design and the lived reality of instructional designers, and, for the relationship of theories of learning and the lived reality of human learners (Streibel, 1989).

The second assumption that needs to be clarified is that grounding theories in the lived experiences of persons is not the same thing as:

1. inferring theories from experience (that would assume that the theoretical components of experience are in the experience and only waiting to be discovered).
2. mapping theories onto experience (that would treat theories as totally artificial "useful fictions").

Rather, experience contains within it various transcendental realities that have the potential for being articulated with socially-constructed symbols and being realized in social practice. I will say more about this phenomenon later in the paper.

You can already see from what I have said that I have begun to address the question of whether instruction is a product or a practice. Grundy provides a useful insight on this point (Grundy, 1987, p.5):

> Curriculum [she writes] is not a concept, it is a cultural construction ... a way of organizing a set of human educational practices.

The same can be said for instruction. Instruction is not a concept but a "way of organizing a set of human practices." Otherwise, we would have a technical approach to education because:

1. the concept comes first (eidos - e.g., objective).
2. the instructional plan comes second.

3. the implementation of the plan comes third.

4. the product comes fourth.

5. the evaluation of the product comes last.

Figure 1 About Here

Where are the people in this picture? Everything seems to be about pre-existing ideas which become explicit plans that then control specific actions. Teacher's behaviors and learner's behaviors are always compared against pre-existing plans and objectives. If on the other hand, instruction is conceptualized as a set of cultural practices, then we can deal with how people experience the emergence of an intention and how they take an active and responsible role in bringing about a goal. Remember, when I am talking about people here, I am referring as much to instructional designers as I am about teachers and learners when each of these persons do their respective work.

Figure 2 About Here

A further clarification is needed about the idea of instruction as a cultural construction of practice. To claim, as Grundy does, that the curriculum (or instruction in our case) is a social construction is not the same thing as claiming that there is a social component to the curriculum (or instruction). Otherwise, social factors would be just another set of factors that are external to the instructional practices of people.

Figure 3a&b About Here

Grundy's clarification about this issue for curriculum applies equally well to instruction (Grundy, 1987, p. 6):

> To think about curriculum [she says] is to think about how a group of people act and interact in certain situations. It is not to describe and analyze an element which exists apart from human interaction.

This is a call for a different type of theory and a different type of relationship between theory and practice. It is a call for an elevation of practice to an equal status with, and a dialectical relationship with, theory.

Jurgen Habermas provides the most complete articulation of a framework that deals with different types of relationships between theory and practice. I will use his ideas as well as Grundy's application of these ideas to curriculum as guides for dealing with instructional design, instruction, and learning.

According to Habermas, there are three types of human interests which ultimately manifest themselves as three ways of knowing. Grundy describes these three human interests as follows (Grundy, 1987. pp. 6-19):

1. The technical human interest entails empirical/analytical ways of knowing that represents the world in terms of objects, processes, and laws which describe the transformation of objects and processes. The natural sciences, for example, display a fundamental technical human interest. In some cases, instructional theories which are constructed and applied as if they were a natural science also fall under the umbrella of the technical human interest (Reigeluth, 1983, 1987; Gagne, 1987; Gagne et al. 1988).
2. The practical human interest entails historical and hermeneutic ways of knowing that represent the physical, social, and cultural worlds as "texts" which have to be interpreted in order for meaning to emerge. Meanings, however, are not in the texts just waiting to be discovered and decoded. That would revert to the technical approach. Rather, meanings are socially and culturally constructed in the speech acts and practices of interacting human agents.

3. Finally, the emancipatory human interest entails a critical way of knowing where critical theorems are gleaned through collective reflection on social and cultural practices and then used to restructure future actions. The struggle here is to:

   a. become conscious of the pre-understandings in existing social and cultural practices,

   b. uncover the contradictions between the ideals of truth, justice, and freedom and actual social and cultural practices,

   c. change social practices.

Figure 4 About Here

Although I will describe each of these three human interests in greater detail below, I will only apply the technical and the practical human interests to instructional design in the rest of the paper.

The Technical Human Interest

The technical human interest, according to Habermas, entails one way of relating to the world. The best example of this comes from the empirical-analytical sciences where a neutral observer (e.g., a researcher) makes "positive" (i.e., publicly verifiable) observations and then posits hypothetical relations about the regularities in the objects and processes of the world. This eventually results in lawful statements about the world that are extended to ever more abstract levels on the one hand and ever more detailed observations on the other. The lawful statements then permit prediction of future observations. This opens up the possibility for linking predictions of future observations with control of future observations because descriptive theories lend themselves to prescriptive use. Reigeluth in his book on Instructional Theories makes this very point (Reigeluth, 1983). The problem with shifting from description to prescription, however, is the semantic shift that takes place. Habermas, quoted in Grundy, makes this point perfectly clear (Grundy, 1987, p. 11): "The meaning of such predictions [writes Habermas] ... [becomes] their

technical exploitability." Prediction becomes control of future actions and control becomes part of the semantic content of knowledge. This, in turn, leads to instrumental action which is guided by technical rules. Grundy summarizes these ideas as follows (Grundy, 1987, p. 12):

> The technical interest is: a fundamental interest in controlling the environment through rule-following action based on empirically grounded laws.

These consequences are acceptable if we are dealing with phenomena that lend themselves to technical exploitability. But what about the case where we use instructional theories to prescribe future instructional actions for sentient human teachers, or we use learning theories to prescribe future learning actions of sentient human learners? The prescriptive use of instructional or learning theories may violate the very way that teachers and learners act in the world (unless they are willing to act like autonomatons, or more generally, like information processors) (Streibel, 1986). This is not to suggest that empirically-grounded instructional or learning theories are totally useless knowledge. They are useful knowledge to teachers (and learners and instructional designers) if they are used as resources rather than controllers for future actions. An Instructional Designer therefore has to find ways to design resources rather than plans for teachers and learners.

The Practical Human Interest

The practical human interest, according to Habermas, entails a different orientation to the world than the technical human interest. Whereas the technical interest is bent on controlling the world, the practical interest is focused on understanding the world. The reason is simple: human beings not only want to be in the world (rather than neutrally observing, theorizing about, and controlling the world) but they have to be in the world. It is part of our human condition. Understanding here, according to Grundy, is more than technical understanding, but the creation of meaning in our lives. Practical understanding therefore has to come to terms with our lived experience in the world. This form of understanding is best developed by the historical-hermeneutical sciences. Note that in this approach to the world, facts are no longer out there to be

discovered but are accessed through our understanding. Polanyi made a similar point when he claimed that we can only focus on explicit facts and knowledge through our tacit knowledge (Polanyi, 1958).

This brings up an interesting dilemma. What exactly does a community of persons examine or look at in the process of socially constructing meanings and knowledge? One person cannot "get into" the mind and heart of another and therefore does not have direct access to another's experience. Furthermore, every individual's experience cannot be the bases for the reconstruction of all knowledge by each individual. The very fact that a community of interacting persons exists argues against a Leibnizian form of individualism. Grundy resolves this dilemma by saying that "both empirical and interpretive sciences have to transform human action into something else in order to study it" (Grundy, 1987, p. 13). In the case of the empirical sciences (of which instructional science is part), human actions are converted into "behaviors." In the case of the hermeneutic sciences, human actions are converted into "texts."

Figure 5 About Here

Note, however, that the "text" of human action is not treated as if it had meaning in it. Hermeneutics is not a form of technical rationality (i.e., it is not a matter of applying procedures). Hermeneutics is a matter of situational judgments.

What counts as success in the realm of practical action? Grundy again spells out the criteria for success (Grundy, 1987, p. 14):

> Knowledge which is concerned with understanding is not to be judged according to the success of the operations arising as a consequence of that knowledge. Rather, it is to be judged according to whether the interpreted meaning assisted the process of making judgments about how to act rationally and morally [in the world].

Notice the juxtaposition of technical and practical action In technical action, the consequence of action is a product (a behavioral outcome in the case of an instructional action) that is compared against a pre-existing idea (e.g., an objective). In practical action, the participants in the action themselves (e.g., the teachers or learners) have to make an on-going series of judgement calls about whether they are moving towards greater understanding. This never-ending goal contains both a technical and a moral dimension (i.e., whether the learner's future action matches their original intention and whether the learner's future action is worthwhile and good for them -- something that cannot be predicted). The knowledge that a teacher and a learner needs is worked out during a series of judgement calls where interpreted meanings are authenticated by the teacher and the learner in the actual unfolding situation.

The best instructional example I ever heard of this was where a teacher showed a video tape about alcoholism in a health class. The teacher proceeded on the assumption that the students would use the examples in the tape as evidence for the evils of alcohol. They did! However, many of the students also sympathized with the alcoholics in the video because they realized that the alcoholics were in an impoverished economic environment where drinking was one of the few avenues left to maintain a modicum of control. If the teacher had not caught on to the meanings that the students were bringing to this situation, the intended health lesson and subsequent evaluation of what was learned from the tape would have been a totally lost. The point of this example is that an instructional designer who spells out a learning objective cannot predict what meanings potential learners will bring to the learning situation. Hence, an instructional designer cannot rely on a technical approach to design. Rather, an instructional designer has to be guided by a practical human interest and support the instructional and learning processes that actually take place. Grundy again spells out the implication of the practical interest (Grundy, 1987, p. 14):

> The practical interest [she writes] is a fundamental interest in understanding the environment through interaction based on a consensual interpretation of meaning.

The Emancipatory Human Interest

Habermas' third human interest goes beyond the technical and the practical by focusing on the ways that people struggle to change their social, economic, and cultural conditions of existence towards forms that are more truthful, more just, and more free. Habermas claims that the ideas of truth, justice and freedom are transcendental realities within everyday human interaction rather than within some external reality. Emancipation, therefore, is not an abstract, external idea but a potential waiting to be realized in the world of human beings. However, to realize emancipation, human beings have to:

1. become critically conscious and aware of how they construct their current knowledges, beliefs, and practices.
2. socially-reconstruct their knowledges, beliefs, and practices.

The technical way of framing knowledge, beliefs, and practices will not help here. Grundy again describes the reasons (Grundy, 1987, p. 17):

> The technical interest will not facilitate autonomy and responsibility because it is an interest in control. An interest in control will certainly facilitate independence for some, but this is a false autonomy, for it is an 'autonomy' which entails regarding fellow humans and/or the environment as objects.

The technical approach to instructional design will therefore not lead to those types of knowledges, beliefs and practices that enhance the emancipatory potential of human beings no matter how efficiently or effectively it produces learning outcomes. Emancipation, or empowerment as Grundy claims it is now called in educational research literature, is "the ability of individuals and groups to take control of their own lives in autonomous and responsible ways" (Grundy, 1987, p. 19).

What will an emancipatory curriculum or emancipatory instruction achieve? According to Grundy, at the level of consciousness (Grundy, 1987, p. 19):

> subjects participating in the educational experience will come to know theoretically and in terms of their own existence when propositions represent distorted views of the world ... and when they represent invariant regularities of existence.

At the level of practice (Grundy, 1987, p. 19):

> the educational encounter ... [will include] action which attempts to change the structures within which learning occurs.... [This will] entail a reciprocal relationship between self-reflection and action.

The emancipatory human interest can therefore be defined as (Grundy, 1987, p. 19):

> a fundamental interest in emancipation and empowerment to engage in autonomous action arising out of authentic insight into the social construction of human society.

I will not address the effect of an emancipatory human interest on instructional design in this paper but will leave that for a future study. Other researchers have already begun to reconstruct instructional design in light of emancipatory human interests (Koetting, 1979; Nunan, 1983; Nichols, 1989) as have educators begun to reconstruct pedagogical practice into critical pedagogical practice (Freire, 1970; Shor, 1980; Livingston, 1987). I therefore now turn to a discussion of treating instruction as a product of instructional design (the technical human interest approach to instructional design) and treating instructional design, instruction, and learning as various forms of inter-related practice (the practical human interest approach).

INSTRUCTION AS A PRODUCT OF INSTRUCTIONAL DESIGN

I would now like to apply Grundy's interpretation of Habermas' ideas to instructional design and instruction. Grundy's summarizes the relationship between theory and practice within the three human interests. This provides a good starting point for our discussion. I will then look at the implications of treating instruction as a product of instructional design and treating behaviors as the product of instruction.

The technical human interest approach to theory and practice treats theory as a guide to action. Traditional instructional design falls into this category. For example, when instructional designers use Reigeluth's Elaboration Theory or Merrill's Component Display Theory in a prescriptive manner, they are taking a technical approach to instructional design and treating instruction as a product of design (Reigeluth, 1983).

The practical human interest approach to instructional design, on the other hand, seeks to authenticate theories "in a process of self-reflection through with [one] test[s] the theoretical explanations in light of ... [one's] experience" (Grundy, 1987, p. 21). Hence, instructional designers in this latter view do not so much create a product called instruction as much as create resources for instructional practitioners in the instructional situation. These resources are then used by instructors as well as learners in a way that will be described in greater detail later in this paper.

The technical human interest approach to solving instructional problems follows a general sequential pattern as described in Figure 1. Notice that the technical approach to designing instruction takes for granted that an outcome an be predetermined and that a set of design plans and implementation plans can guide design work and implementation work to create the desired outcomes. The outcomes are then compared against the pre-existing objectives to see if they measure up. This whole approach turns the design process into a rational decision-making process where options and alternative paths are defined within a problem space (Streibel,

1989). Likewise, teaching becomes an instructional management problem of steering the learner through an imaginary instructional problem space and keeping records of his or her "progress." Instruction here is not a process of negotiating the meaning of means and ends with learners. Instructional design, instruction, and learning, in fact, are merely matters of skill.

Figure 6 About Here

The technical human interest approach to instructional design (and instruction) has some fundamental problems. First of all, this approach overlooks the fact that instructional designers are constantly making judgement calls in the process of crafting the instructional materials or the instructional systems. It also overlooks the fact that teachers (or students) who use these materials are constantly bringing their own meanings to the teaching (or learning) situation. However, these judgement calls on the part of designers (or teachers or students) are not conceptualized or legitimized within the technical approach to instruction. When they are acknowledged, they are given secondary or peripheral status such as subjective or social factors. Grundy describes this problem as follows (Grundy, 1987, p. 23):

> Although skilled actions may allow for some decision-making and choice, the range of choice, and hence the freedom that the artisan has to take action, is always restricted by the eidos [i.e., objective] of what is to be created.

The work of instructional designers (and of instructors) within the technical approach is therefore essentially reproductive. That is, designers are (Grundy,1987, p. 26):

> reproducing in the material world eidеis which already exist in the abstract world of ideas or which have clearly been reproduced elsewhere.

Grundy goes on to describe the hierarchical relationships between theory and practice (Grundy, 1987, p. 27):

The technical interest [she concludes] presupposes a hierarchical relationship between theory and practice. Practices exist in order to bring certain plans to fulfillment. Moreover, good practice is taken to be evidence of sound theory.

Hence, in the case of instructional designers who use a technical approach to instruction, instructional design practices exist in order to bring a model of instructional design to fulfillment. In the case of teachers, instructional practices exist in order to bring a model of instruction to fulfillment. In the case of the learner, instructional stimuli and learning activities exist in order to bring a model of learning to fulfillment. In each of these cases, the outcome is seen as a product and the model is believed to have a causal relationship to the product. The people (designers, teachers, and learners) are only implementors of the models.

What's wrong with the technical approach to instructional design and instruction? After all, this approach predominates our current thinking about design and instruction. Why change something we have been doing for decades? Why not continue to let theoretical statements "stand in a deterministic relationship to the world of practice" -- especially since theories are becoming much more refined? (Grundy, 1987, p. 28) Why not take advantage of this approach with computer-based instruction where theoretical models control the "behavior" of computer systems (Streibel, 1988). Grundy again provides a simple answer. In order for the technical approach to work "we must control both the learning environment and the learner" (Grundy, 1987, p. 29). In the case of control of physical objects, this does not cause a problem because it does not change their nature. However, in the case human beings, a controlling orientation changes their nature. Humans, after all, grow up into our images of the "other." What is, therefore, ultimately wrong with the technical approach to education, is that it embodies certain "power relationships within the learning environment" -- power relationships that do not lend themselves to the growth of autonomy and responsibility in the identity of the learners.

The technical orientation towards the design of instruction has another potential limitation. Because curriculum-making power is no longer vested in the teacher, the teacher only

has implementation choices left. This constitutes a deskilling of teachers (Apple, 1975, 1979, 1982). Furthermore, the students also have no curriculum-making power. Finally, even the instructional designer is disempowered because (Grundy, 1987, p. 32):

> once the design process is complete, the plan becomes external to the planner, and has an authority which is separate from the person of the designer.

Each of these people in their respective spheres are deskilled in practice-making activities and reskilled in technological activities (e.g., designer becomes design-process manager, teacher becomes instructional manager, and learner becomes time-on-task manager). None of these people, therefore, "remain immune to the technologizing and obsolescence at work in the technological society." (Grundy, 1987, pp. 33-34).

Finally, there are problems with how the curriculum itself is shaped by the technological orientation. Grundy is very explicit (Grundy, 1987, p. 34):

> The technical interest ... promote[s] a view of knowledge as sets of rules and procedures or unquestionable 'truths'. Knowledge is regarded as a commodity, a means to an end.

Furthermore, she concludes that (Grundy, 1987, p. 35):

> the technically informed curriculum is not only bound by the culture of positivism as far as the selection of content is concerned, but the methodology by which the content is imparted is also determined by positivistic requirements about objectivity and outcomes.

The technological orientation, therefore, contains a positivistic epistemology (i.e., knowledge is made up of facts, laws, and procedures), an objectivist ontology (i.e., the world is made up of interacting objects with objective behaviors, cognitive structures, and skills), and a positivistic methodology (i.e., following instructional plans brings about a learning product).

How does evaluation fit into this picture when technological interests predominate. Evaluation. as was mentioned earlier, entails measuring the product of instruction against a pre-

existing idea (e.g., an objective). To do this, both the learner, the learning process, and the learning outcome have to be objectified. However, as Grundy concludes, this "trivializes the teaching-learning act" (Grundy, 1987, p. 37) because it views both teaching and learning as mechanistic acts and because it hides the political nature of evaluation (Guba & Lincoln, 1989). Have you ever asked yourself, for example, what grading on a curve contributes to learning? Why can't everyone get an A under these conditions. Curriculum scholars who study this issue have concluded that grading on a curve has more to do with management and control of students than with fulfilling the learning potential of each individual (Kliebard, 1987). Finally, lest you think that individualized instruction is the answer to grading on the curve, individualized instruction carries the objectification and social fragmentation of learning one step further and, therefore, is an intensification of the technological approach to instruction (Streibel, 1988).

So! Where are we with respect to the technical orientation to instruction? Grundy sums up the technical interest as follows (Grundy, 1987, p. 52):

> The practitioner [and this could be the instructional designer, the instructor, or the learner] whose knowledge is constituted by the technical interest perceives the external eidos [e.g., objective] as a finite plan, and uses his/her skills to modify, adapt, and apply it in a different situation to produce an outcome that is judged in terms of efficiency and effectiveness.

The actual instructional designers, or teachers, or learners engaging in their respective practices (i.e., designing, teaching, learning), however, (Grundy, 1987, p. 52):

> grasp the eidos in terms of principles, relying upon practical judgments as a basis for decision. What is important for him/her is understanding and the creation of a meaningful learning environment.

Hence, instructional designers craft a design (whether instantiated in print, in video, or on a computer) that teachers use as a resource rather than as a plan. Teachers, in turn, craft an appropriate learning environment for each new learner. The learner then engages this

environment to construct meaningful knowledge and actions under the guidance rather than the control of the teacher (Rogoff & Lave, 1984; Lave, 1988; Brown, 1988; Brown et al., 1989). Each of these people may pretend that they are following plans but, in fact, these plans are only resources for action (Suchman, 1987). The actual work of an instructional designer, an instructor, or a learner is therefore informed by a practical interest because they construct the means as well as the ends in the process of doing their work.

INSTRUCTIONAL DESIGN AND INSTRUCTION AS PRACTICE

I will now move beyond the technical framework and look at curriculum and instruction from the perspective of Habermas' theory of practical human interests. The term practical here emphasizes the stiuatedness of all human actions be they a designer designing instruction, a teacher teaching a lesson, or a learner learning something. The key to success for practitioners in each of these situations is human judgement which in turn is dependent on "reading" the "meaning" of situations. This elevates the importance of hermeneutical interpretation in work and learning. "Hermeneutical knowledge," writes Grundy, "is a pre-eminent form of knowledge upon which action can proceed." (Grundy, 1987, p. 59)

Grundy traces Habermas' notion of practical action back to Aristotle's notion of phronesis. Phronesis entails practical judgement and situational knowledge. Phronesis also involves taste which (Grundy , 1987, p. 61):

> has to do with what's fitting for a particular situation.... [Furthermore] knowledge, judgement, and taste combine to produce a discernment that is more than a skill.

Hence, practical judgement goes beyond technical decision-making because it contains (Grundy, 1987, p. 62):

a disposition [that is oriented] towards 'good' rather than 'correct' action [as is technical action]. It possesses an aspect of moral consciousness which the disposition of techne [i.e., the technical orientation] lacks.

These ideas apply directly to designing and teaching and learning. For example:

1. when we force an instructional designer to follow instruction design models or procedures in order to achieve a predetermined design goal (as in expert instructional design systems) we restrict the designer to technical forms of rationality and deny them the opportunity to exercise practical (design) judgement.
2. when we force an instructor to follow instructional models or procedures in order to achieve a predetermined instructional goal (as in prescriptive instructional design theories), we restrict the instructor to technical forms of rationality and deny them the opportunity to exercise practical (instructional) judgement.
3. when we force a learner to follow learning models and procedures in order to achieve a predetermined learning outcome (as in cognitive learning theories), we restrict the learner to technical forms of rationality and deny them the opportunity to exercise knowledge construction judgments.

The lived reality of designers, instructors, and learners, however, indicates that these persons include practical judgments in their respective spheres. Why not design instruction to acknowledge this basic fact and stop restricting these persons to technical forms of rationality? The reorientation involves becoming clear about how to design with the "good" of persons in mind rather than with the "correct" learning outcomes in mind. What does this mean for instructional designers? Grundy again points the way to an answer.

The first thing to clarify is the different dispositions involved in the technical and the practical orientations. In the technical human interest, skill is "product related" and "works towards an end other than itself" (Grundy, 1987, p. 62) (e.g., instructional design skill working towards a predetermined instructional skill). In Habermas' practical human interest, on the

other hand, practical judgement is "directed towards the process of taking action." (Grundy, 1987, p. 62). Figure 7 summarizes these different type of dispositions.

Figure 7 About Here

This constant judgement making is guided by a qualitative idea of the "good". The "good", however, is not something external and prior to the situation. Rather, it is "always in a state of being formed" and implicit in the situation. Hence, Grundy concludes that (Grundy, 1987, p. 63):

> since what is right cannot be fully determined independently of the situation, practical action is characterized by choice and deliberation.

Instructional designers therefore have to be willing to trust their sense of the "good" as they craft something for teachers and learners. They also have to create something that leaves a space for teachers and learners to apply their own sense of the "good" in the teaching and learning situation. Designing "teacher-proof" instruction does not leave such space for teachers nor does designing "idiot-proof" instruction leave such space for learners.

A second thing to clarify is that practical action "should be taken on the basis of a thorough understanding of the situation." (Grundy, 1987, p. 65) This is not achieved by way of empirical-analytical knowledge alone because such knowledge is not situation specific. Rather, the participants in a situation have to engage each other and the situation as they reflect on and deliberate about further action. Deliberation, however, says Grundy (Grundy, 1987, p. 65):

> incorporates processes of interpretation and meaning making of a situation so that appropriate action can be decided upon and taken. Appropriate action ... further[s] the good of the participants in the action.

Appropriate action does not, as in the case of technical action, serve someone's interests external to the situation (e.g., where an objective serves an institutional need). Rather, appropriate action

subsumes technical forms of action because it is the participants in a situation who decide what serves their own good.

A third thing we have to clarify is the role of understanding in the practical orientation. Grundy spells out the parameters of situational understanding (Grundy, 1987, p. 67):

> In trying to understand anything, we come to it with certain predisposition and fore-meanings (pre-judgments or prejudices). The process of understanding or interpreting text is a process of allowing our prejudices (pre-judgments) to interact with the meaning that the author of the text intended so that the text becomes 'meaningful.'

Remember that the notion of "text" here encompasses both human interaction in situations as well as the more traditional notion of text. Hence, coming to understand a situation requires engagement with the situation and dialogue with others about the situation. This, in turn, means that practical action entails the "negotiation" of meaning by the participants in a situation. Meanings are not out there in situations waiting to be discovered and decoded. That would treat meaning making as a technological enterprise. Rather, meanings are interpersonally constructed.

Finally, negotiation presupposes the "equality of participants." Otherwise, the power imbalance between participants would predetermine the outcome of meaning making. The implications of the foregoing ideas for instructional designers are enormous:

1. the power relationship between employer (e.g., institutions) and instructional designers has to be addressed if the practice of instructional design is to include negotiated meanings and deliberated actions.
2. the power relationship between instructional designers and instructors has to be addressed so that the instructor in the teaching situation and not the instructional designer (who is not in the learning situation at the time of learning) determines the constructed meanings in the situation.

3. the power relationship between instructors and learners has to be addressed so that the learner has some space to construct his or her own meanings and understandings.

Notice that this issue is relevant even when the instructional content is classical physics or mathematics (where professional communities have worked out the meanings and symbolic notations for those meanings). For the novice learner, an understanding of the meanings of classical science and mathematics is constructed and negotiated anew each time within the learning situation. Hence, in order to respect the meaning-making processes of novice learners, neither the "text" of the instructional design (e.g., the instructional system) nor the "text" of the teacher's instructional actions has the authority to impose a set of meanings. Grundy summarizes this point as follows (Grundy, 1987, p. 69):

> [Curriculum as practice] reject[s] as legitimate educational content that which does not have at its heart the making of meaning for the learner. It is not sufficient [she continues] that the teacher is able to interpret the curriculum (or instructional) texts to come to an understanding of what the document prescribes.

Rather, the teacher (as well as the instructional designer) is only one of the many agents who engages the learner in the construction of meanings. Having a teacher who can decode the social and institutional prescription of curriculum and instruction certainly helps but it is not sufficient to bring about meaningful learning in the learner. Engagement, dialogue, and negotiation with the learner in specific situations is necessary. Grundy therefore concludes that (Grundy, 1987, p. 70):

> it is no longer makes sense to speak of evaluating the effectiveness of curriculum (or instruction) in terms of pre-specified objectives.

Pre-specified objectives are external to the work of teaching and learning. The worthwhileness of curriculum and instruction in a given situation (i.e., meaningful learning for the learner interacting with the teacher) has to be worked out and negotiated between the participants in that situation. A teacher can certainly wear multiple hats (i.e., represent society's interests, represent

institutional interests, represent personal or professional interests, etc.) However, a teacher has an obligation to make sure that none of these interests overwhelms the learner's growth in understanding.

What do these ideas imply for instructional designers? Is there anything they can do in their own realm of practice that does not dominate the constructed meanings of teachers and learners? Grundy, quoting Stenhouse's research, supplies an answer (Grundy, 1987, p. 80): [practical curriculum development] should focus on supporting teachers in the exercise of their judgments in their local contexts.Hence, instructional designers should:

1. focus on teachers's experiences,
2 support the processes that teachers undertake to act meaningfully in a given situation,
3. create resources or environments that support teachers in the use of their judgments to improve their practices.

Teachers, after all, are the professional practitioners on the spot in the learning situations who have to figure out what things mean to learners at any moment.

Grundy continues by claiming that teachers only learn from their experiences when they systematically reflect on their experience and develop more refined practices. For teachers to mature as professional practitioners, they have to construct their own personal ways of dealing with increasingly complex situations. However, the plans and procedures they do construct do not have any authority over other teachers who might choose to follow similar plans (Suchman, 1987). Otherwise, we are back to the technological approach to teaching where expertise resides in the procedures and not in the personally constructed practices of the teacher (Dreyfus & Dreyfus, 1986; Streibel, 1989).

CONCLUSION

The main conclusion of this paper is that Habermas' theory of practical human interests is a more adequate account of the work done by instructional designers, teachers, and learners than his theory of technical human interests. This means that instructional designers will have to reorient their efforts in the following manner:

1. since all people bring preunderstandings to a situation and construct meanings in a situation, instructional designers will have to find ways to support this process rather than believe they can pre-specify learning outcomes for the learner and pre-specify instructional plans for the teacher.
2. since all people exercise practical judgement in the process of constructing meanings while teaching and learning, instructional designers will have to find ways to create useful resources for teachers and learners that support the meaning-making process. For example, instructional designers can pose problems and critical questions for teachers and learners rather than present predigested puzzles.
3. since right action in a given situation cannot be prespecified but only worked out by the participants, instructional designers will have to create learning resources and learning environments that leave some space for teachers and learners to work out their own sense of the good. Hence, instructional designers will have to give up the notion of designing 'teacher-proof' instruction and 'idiot-proof' learning resources.
4. since reflection and deliberation by the participants in a learning situation are so crucial to the creation of meaningful practice, instructional designers will have to find ways to avoid conceptualizing everything as a skill. This even applies to high-level abilities such as problem-solving, collaboration, and communication. Hence, instructional designers should not see problem-solving skills, or

collaboration skills, or communication skills as the highest form of learned capabilities but see these things as by-products of problem-posing judgments, collective deliberation, and collective meaning making

5. since meaningful practice (be it instructional design practice, instructional practice, or learning practice) requires the negotiation of meaning as well as the negotiation of the terms of evaluation and power relations, instructional designers will have to go beyond the technological metaphor (i.e., beyond instructional plans and objectives, beyond learning theories) and participate directly in the teaching and learning experience. Barring this, they should at least create learning resources and learning environments that permit teachers and learners to construct knowledge as they see fit.

The shift that is implied in all of these claims is from a traditional instructional designer whose knowledges and practices are shaped by technological human interests to a learning resource designer and a learning environment designer whose knowledges and practices are shaped by a practical human interest.

Figure 8 About Here

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Technical Approach to Instructional Design, Instruction, and Learning

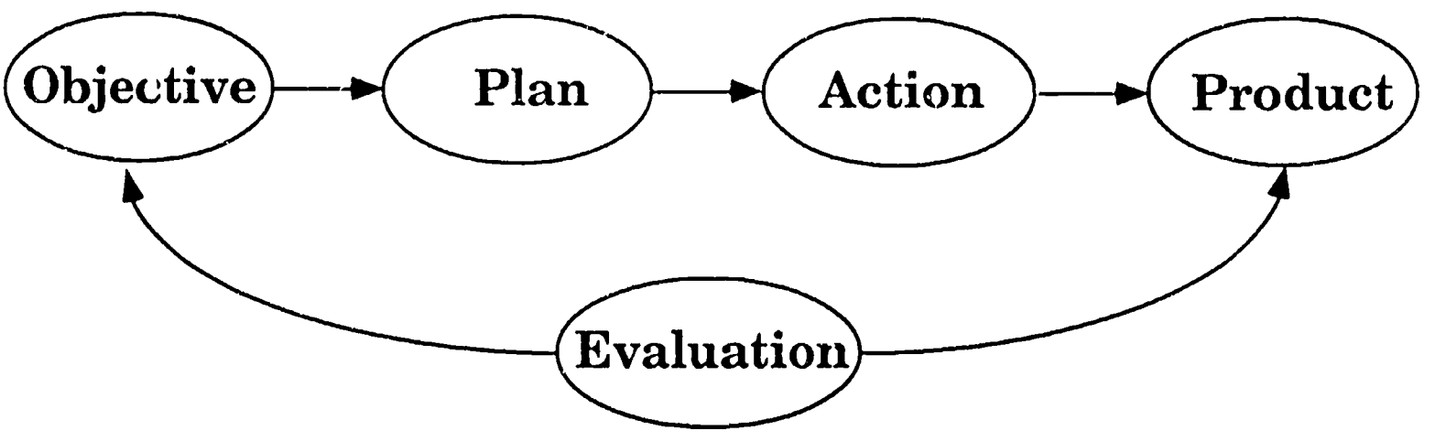


Figure 1

Practical Approach to Instructional Design, Instruction, and Learning

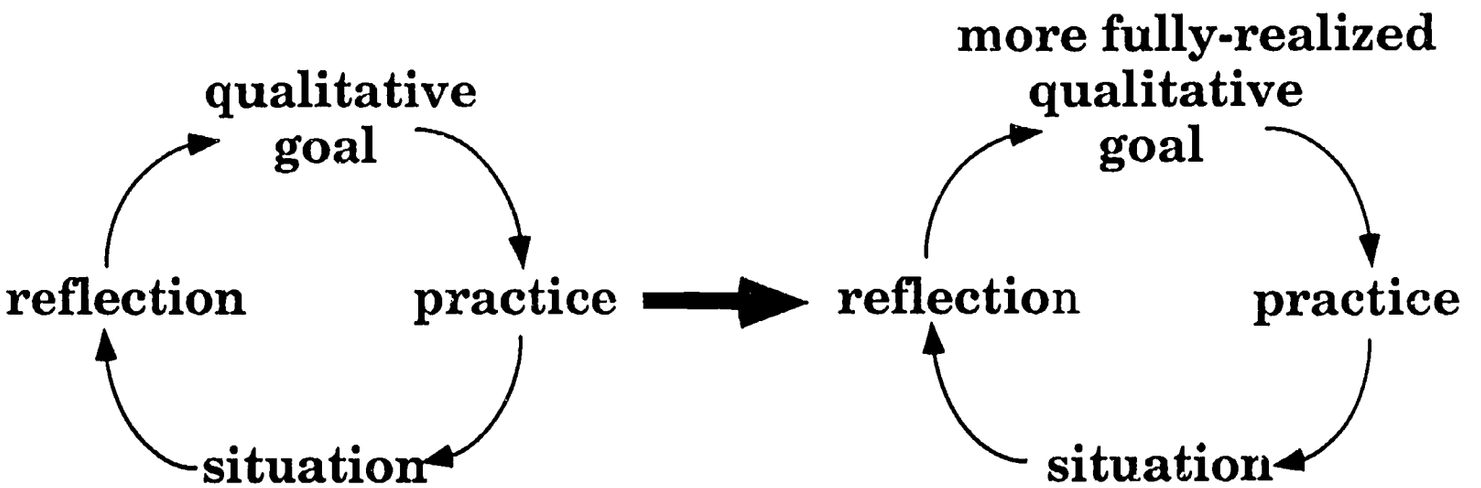


Figure 2

Social Factors in the Technical Approach

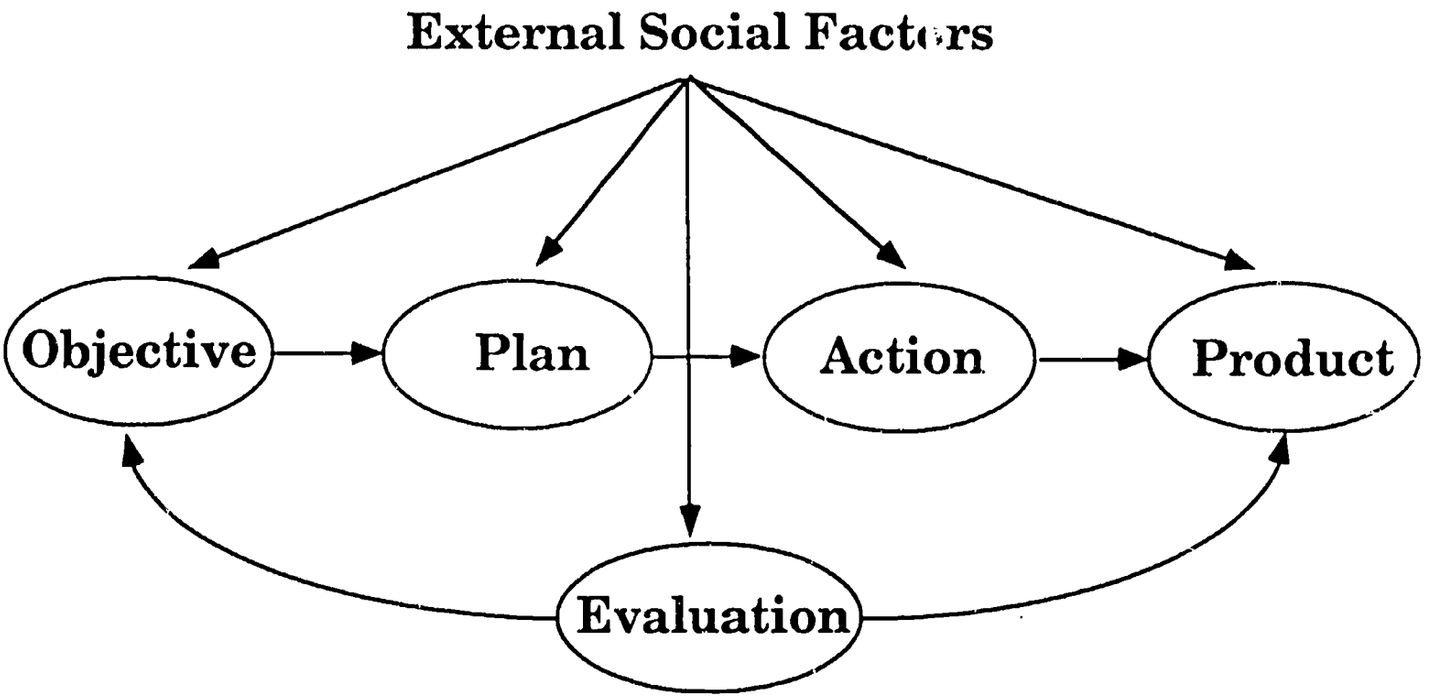


Figure 3a

Social Component of the Practical Approach

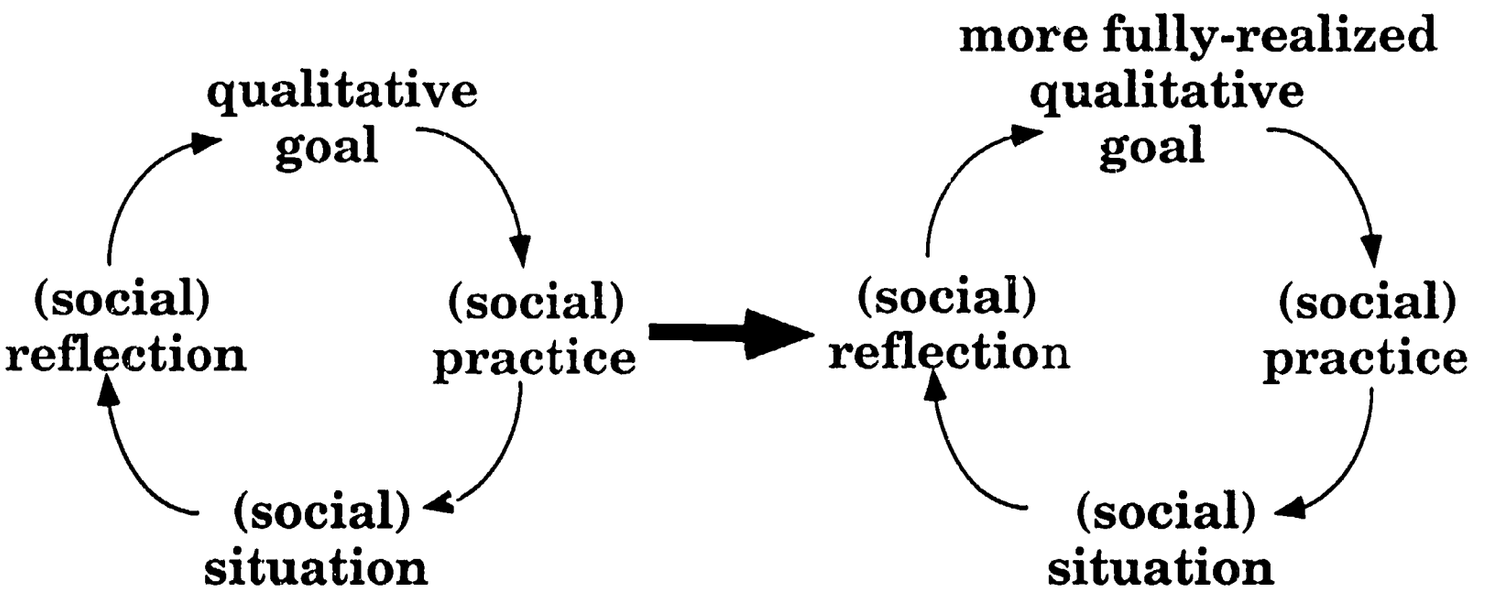


Figure 3b

Types of Human Interest

	Technical	Practical	Emancipatory
Ways of Knowing	empirical/ analytical	historical/ hermeneutic	critical/ cultural
Knowledge	facts, laws, procedures	narrative stories	critical theorems
Role of Theory	theory guides actions	theories as resources for actions	theorems help construct new knowledge and practice

Figure 4

Objects of Study

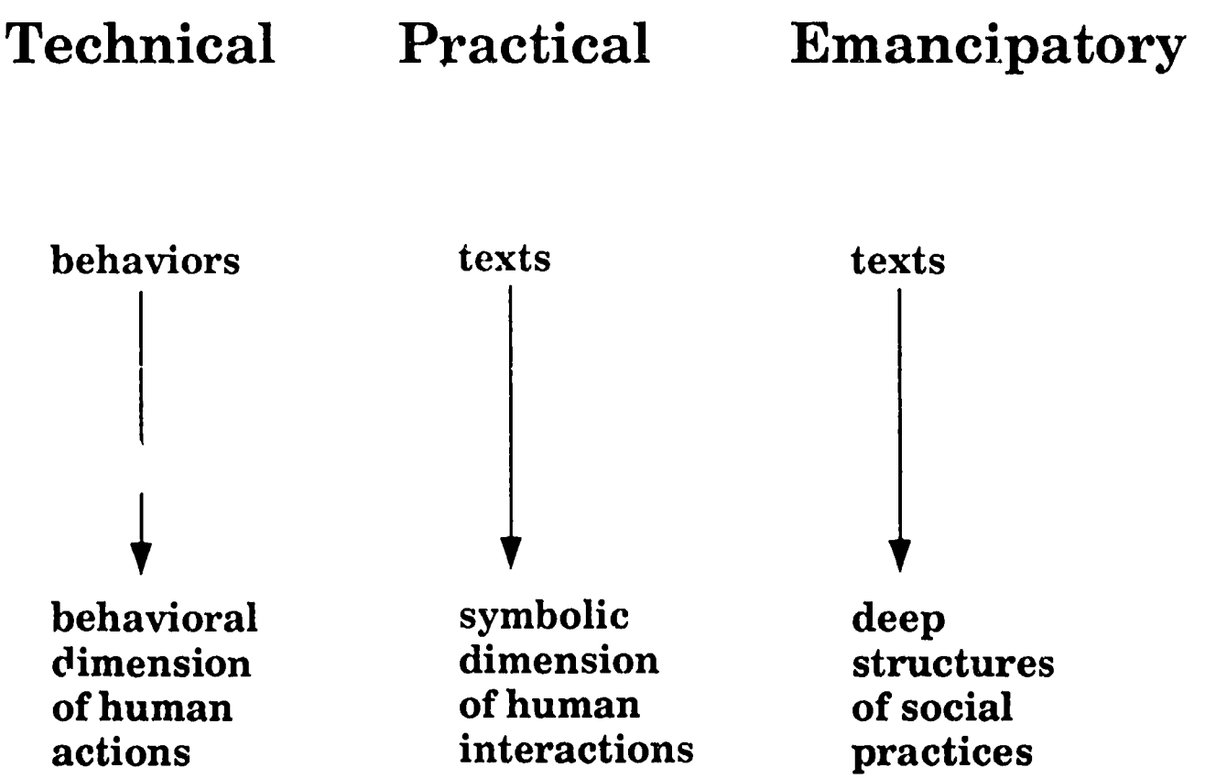
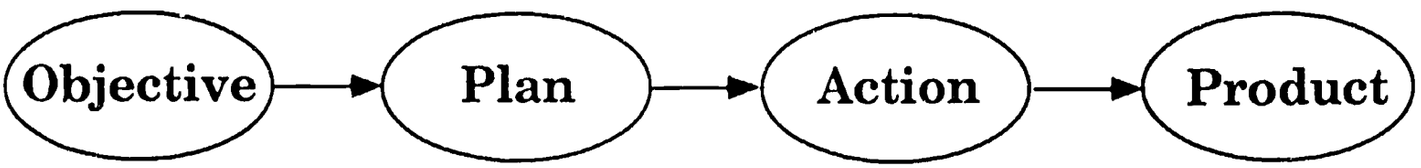


Figure 5

Skills Needed

in the Technical Approach



- needs analysis	- design	- implementation	- measurement
- task analysis	- development	- management	- evaluation
- behavioral objectives	- planning		

Figure 6

Dispositions in the Various Types of Human Interest

	Technical	Practical	Emancipatory
Basic Orientation	controlling self, other, and environment for external purposes	understanding self, other, and environment through interaction	restructuring social practices for justice and freedom
Outcomes	correct behavior	meaningful action	just society
Authority Resides In	plan	practitioner	historical community
Forms of Logic	instrumental logic	consensual logic	dialectical logic

Figure 7

Proposed Shift

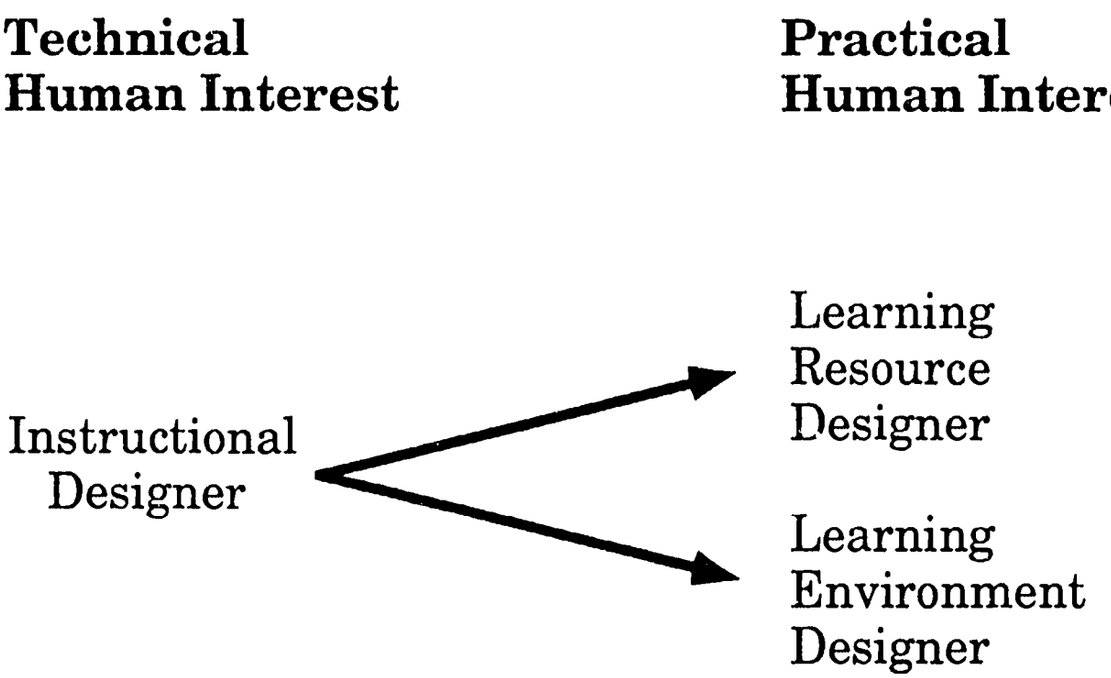


Figure 8